

# Mineral Industry Surveys

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## TIN IN FEBRUARY 2004

Domestic consumption of primary tin in February was estimated by the U.S. Geological Survey to be 7% below that in January and 6% below that in February 2003.

The Platts Metals Week average composite price for tin in February was \$4.42 per pound, about 2% above that in January and about 37% above that in February 2003.

Europe continues to be a larger market for tin than the United States. In the critical tin can field, one of the dominant end use sectors in Europe is the pet food can, where pouches are making inroads into the canned pet food market. For the first time, in 2003, "Whiskas" cat food in pouches outsold the canned version in the United Kingdom (UK). Launched over 2 years ago, "Whiskas" in pouches was the leading pet food brand in the year ending October 1, 2003. Heavily promoted by the Mars Group (USA), its owner, sales of "Whiskas" in pouches rose by 17% to \$187 million, to account for almost a fifth of the top-ten pet food products overall by value. It outsold canned "Whiskas" by 22%. Overall sales of pet food in the UK were \$1.2 billion. Canned pet food is still dominant in the UK, with a 70% market share. For the rest of Europe, canned pet food controls 80% of the market (Canmaker, 2004).

### Update

On April 2, 2004, the Platts Metals Week composite price for tin was \$5.86 per pound.

Paranapanema, Brazil's leading nonferrous metals producer, has abandoned plans for new \$18 million tantalum and niobium plants and will focus instead on raising tin output. Paranapanema is Brazil's largest tin producer (Metal-Pages, 2004<sup>1</sup>).

Paranapanema has spent \$40 million to boost future Pitinga tin output with its Rocha Sa project but is expected to produce only 7,600 metric tons (t) of tin in 2004, just below the 8,000 t produced in 2003. About 66% of this total will be exported and all of it will come from Pitinga. Other Brazilian tin producers

will turn out about 2,400 t of tin in 2004, bringing total tin output to 10,000 t. Of the 7,600 t of tin Paranapanema is expected to extract from Pitinga this year, 33% will come from the Rocha Sa project (a deposit in which granite is the host rock) and 67% will come from the rapidly depleting adjacent alluvial deposits, the same percentages as in 2003. By the end of 2006, the company will be getting all of its tin, about 9,700 t, from Rocha Sa and none from the exhausted alluvial deposits at Pitinga (Platts Metals Week, 2004).

PT Timah, Indonesia's Government-controlled tin producer, announced that its refined tin production in 2003 reached an all-time record level of 46,000 t, but this was only achieved by running down its previously very high stocks of tin concentrates (CRU Week in the News, 2004<sup>§</sup>).

Brush Wellman Corp. (Cleveland, OH) announced the development of a copper-nickel-tin alloy that is said to provide both lubricity and corrosion resistance in high-load bearing applications. Called "Tough Met," the alloy has been used in bearings for applications such as mining equipment, aircraft, and race cars. Two variations of the alloy contain 6% and 8% tin (Advanced Materials & Processes, 2004).

### References Cited

- Advanced Materials & Processes, 2004, Cu-Ni-Sn bearing alloy has lubricity, resists corrosion: Advanced Materials & Processes, v. 162, no. 3, March, p. 11-12.  
Canmaker, 2004, Canned pet food holds out in Europe: Canmaker, v. 17, February, p. 20-21.  
Platts Metals Week, 2004, Pitinga to produce 7,600 mt in 2004: Platts Metals Week, v. 75, no. 12, March 22, p. 11.

### Internet References Cited

- CRU Week in the News, 2004 (April 1), Tin, accessed April 2, 2004, at URL <http://www.crumonitor.com>.  
Metal-Pages, 2004 (March 19), Paranapanema cancels Ta/Nb plants, accessed March 22, 2004, at URL <http://www.metal-pages.com>.

<sup>1</sup>References that include a section mark (§) are found in the Internet References Cited section.

TABLE 1  
SALIENT TIN STATISTICS<sup>1</sup>

(Metric tons, unless otherwise noted)

	2004			
	2003 <sup>p</sup>	January	February	January-February
Production, secondary <sup>e, 2</sup>	10,800	900	900	1,800
Consumption:				
Primary	37,400	3,170 <sup>r</sup>	2,950	6,120
Secondary	8,460	681 <sup>r</sup>	682	1,360
Imports for consumption, metal	37,100	2,530	NA	NA
Exports, metal	3,690	257	NA	NA
Stocks at end of period	6,520	6,010 <sup>r</sup>	6,060	XX
Prices (average cents per pound): <sup>3</sup>				
Metals Week composite <sup>4</sup>	339.84	432.53	442.15	XX
Metals Week New York dealer	218.06	303.88	314.12	XX
London, standard grade, cash	207.00	294.00	302.00	XX
Kuala Lumpur	209.62	295.44	301.75	XX

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available. XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits, except prices.

<sup>2</sup>Includes tin recovered from alloys and tinplate. The detinning of tinplate (coated steel) yields only a small part of the total.

<sup>3</sup>Source: Platts Metals Week.

<sup>4</sup>The Metals Week composite price is a calculated formula, not a market price, that includes fixed and finance charges, and a risk factor. It is normally substantially higher than other tin prices.

TABLE 2  
METALS WEEK COMPOSITE PRICE<sup>1</sup>

(Cents per pound)

Period	High	Low	Average
2003:			
February	333.87	310.69	322.82
March	330.75	318.70	323.84
April	326.53	317.74	321.54
May	333.80	325.19	330.58
June	335.08	324.38	329.44
July	335.48	324.04	331.38
August	339.23	332.37	335.84
September	347.80	336.59	340.70
October	366.28	346.47	359.21
November	373.73	356.40	364.20
December	437.61	378.77	404.65
Year	437.61	303.14	339.84
2004:			
January	439.98	424.94	432.53
February	456.45	429.49	442.15

<sup>1</sup>The Metals Week composite price is a calculated formula, not a market price, that includes fixed and finance charges, and a risk factor. It is normally substantially higher than other tin prices.

Source: Platts Metals Week.

TABLE 3  
TINPLATE PRODUCTION AND SHIPMENTS IN THE UNITED STATES<sup>1</sup>

(Metric tons, unless otherwise noted)

Period	Tinplate waste (waste, strips, cobble, etc.) (gross weight)	Tinplate (all forms)			Shipments <sup>2</sup>
		Gross weight	Tin content	Tin per metric ton of plate (kilograms)	
2003 <sup>p</sup>	W	2,500,000	7,750	3.1	2,100,000
December	W	204,000	647	3.2	172,000
2004:					
January	W	210,000	663	3.2	167,000
February	W	200,000	615	3.1	NA

<sup>p</sup>Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>Source: American Iron and Steel Institute monthly publication.

TABLE 4  
U.S. TIN IMPORTS FOR CONSUMPTION AND EXPORTS<sup>1</sup>

(Metric tons)

Country or product	2003		2004
	Year <sup>p</sup>	December	January
Imports:			
Metal (unwrought tin):			
Bolivia	5,720	320	384
Brazil	3,000	266	100
China	4,340	309	300
Indonesia	3,070	120	340
Malaysia	490	65	160
Peru	19,100	1,420	1,210
Russia	21 <sup>r</sup>	--	--
United Kingdom	143	39	20
Other	563 <sup>r</sup>	63	21
Total	37,100	2,610	2,530
Other (gross weight):			
Alloys	3,820	589	172
Bars and rods	338	28	32
Foil, tubes, pipes	4	--	--
Plates, sheets, strip	270	39	38
Waste and scrap	921	61	6
Miscellaneous	2,670	230	186
Total	8,030	947	434
Exports (metal)	3,690	340	257

<sup>p</sup>Preliminary. <sup>r</sup>Revised. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 5  
CONSUMPTION OF TIN IN THE UNITED STATES, BY FINISHED PRODUCT<sup>1</sup>

(Metric tons of contained tin)

Product	2003 <sup>p</sup>	2004						
		January			February			January- February
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous) <sup>2</sup>	1,820	132	W	132	133	W	133	266
Babbitt	235 <sup>r</sup>	19	W	19	13	W	13	32
Bar tin and anodes	278 <sup>r</sup>	12	W	12	12	W	12	24
Bronze and brass	2,800 <sup>r</sup>	102 <sup>r</sup>	106 <sup>r</sup>	208 <sup>r</sup>	104	107	211	419
Chemicals	8,410 <sup>r</sup>	704	W	704	704	W	704	1,410
Collapsible tubes and foil	W	W	W	W	W	W	W	W
Solder	12,500 <sup>r</sup>	849	265	1,110	677	265	942	2,060
Tinning	450	36 <sup>r</sup>	--	36 <sup>r</sup>	39	--	39	75
Tinplate <sup>3</sup>	7,800 <sup>r</sup>	663	--	663	615	--	615	1,280
Tin powder	W	W	--	W	W	--	W	W
White metal <sup>4</sup>	W	W	--	W	W	--	W	W
Other	843 <sup>r</sup>	53 <sup>r</sup>	10	63 <sup>r</sup>	52	10	62	125
Total reported	35,200 <sup>r</sup>	2,570	381 <sup>r</sup>	2,950 <sup>r</sup>	2,350	382	2,730	5,680
Estimated undistributed consumption <sup>5</sup>	10,800	600	300	900	600	300	900	1,800
Grand total	46,000 <sup>r</sup>	3,170	681 <sup>r</sup>	3,850 <sup>r</sup>	2,950	682	3,630	7,480

<sup>p</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing proprietary data; included with "Other." -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes terne metal.

<sup>3</sup>Includes secondary pig tin and tin components of tinplating chemical solutions.

<sup>4</sup>Includes pewter, britannia metal, and jewelers' metal.

<sup>5</sup>Estimated consumption of plants reporting on an annual basis.